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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,454	12/05/2003	Andrew James Seeley	M03B318	1037

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The BOC Group, Inc.
Legal Services-Intellectual Property
575 Mountain Ave.
Murray Hill, NJ 07974

EXAMINER

WARTALOWICZ, PAUL A

ART UNIT	PAPER NUMBER
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1754

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/15/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/729,454

Applicant(s)

SEELEY ET AL.

Examiner

Paul A. Wartalowicz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 4 and 7-13 is/are pending in the application.
- 4a) Of the above claim(s) 14-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 4 and 7-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Withdrawn rejections

The 35 USC 102 rejections over Ishii et al. have been withdrawn.

Response to Arguments

Applicant's arguments filed 12/14/06 have been fully considered but they are not persuasive.

Applicant argues that it would not have been obvious to modify the cleaning apparatus of Ishii et al. to provide the cleaning agent and the ammonia decomposition catalyst in a single chamber because Ishii teach that the two materials are heated to incompatible temperatures and that carrying out these reactions in two separate zones of a single chamber would not be a simple integration of two reaction chambers requiring no undue experimentation as suggested by the Examiner.

However, considerations such as insulation and heating necessary to accommodate the conditions necessitated by the reaction conditions of the separate compartments fall under the purview of routine experimentation. Additionally, one of ordinary skill would recognize that benefits such as economy of scale would result from the combination of two separate chambers into a single chamber comprising two compartments and this motivation would lead to the currently claimed invention.

Applicant additionally argues that Otsuka teaches away from Ishii because the apparatus of Otsuka could not perform the process of Ishii. This is not persuasive because the rejection does not rely on the process of Ishii performed in Otsuka; Otsuka

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demonstrates how one of ordinary skill would recognize each physical arrangement as a known and obvious variant of the other.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al. (5632964) as applied to claim 4 above and further in view of Otsuka et al. (6749819).

Ishii et al. teaches a method for cleaning exhaust gas which contains both ammonia and metalorganics such as trimethyl gallium and trimethyl indium including: first treating the metalorganic components with a first agent which can be copper on a soda or soda lime carrier and can be in the form of a heated fixed bed and second treating with an ammonia decomposition catalyst of nickel on a ceramic carrier with heat to decompose the ammonia into nitrogen and hydrogen (Column 1, lines 36-44; Columns 2-3, lines 66-5 respectively; Column 3, lines 27-30 and 62-65; Column 4, lines 7-28 and 51-53; Columns 6-7, lines 54-7 respectively; see also sole figure). Ishii et al. teaches an embodiment wherein the first and second treating steps are in separate

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chambers, but does not teach an embodiment wherein the first and second treating steps occur in a single chamber sub-divided into two zones.

It would have been obvious to modify the process of Ishii et al. by combining the separate chambers into a single chamber having two portions (one for each treating agent) because making each treating agent integral to single treatment chamber would be obvious to one of ordinary skill in the art (*In re Larson*, 144 USPQ 347 (CCPA 1965)), without any undue experimentation, particularly in light of the fact that benefits such as economy of scale could be recognized by doing so. It would further be obvious in light of the state of the art as evidenced by Otsuka et al. (6749819) which demonstrates by way of Figures 2 (A) and (B) that one of ordinary skill in the art would recognize each physical arrangements as a known and obvious variant of the other.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul A. Wartalowicz whose telephone number is (571) 272-5957. The examiner can normally be reached on 8:30-6 M-Th and 8:30-5 on Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (571) 272-1358. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Paul Wartalowicz
March 8, 2007



WAYNE A. LANGEL
PRIMARY EXAMINER